PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	)	Group Art Unit: 2169
	)	
KEN FORSSE	)	Examiner: James J. Wilcox
	)	
Serial No. 10/821,655	)	
	)	
Filed: April 8, 2004	)	Docket No. FORSSE-41029
	)	
For: PROCESS FOR VISUALLY ORGANIZING INFORMATIONAL CONCEPTS AND RELATIONSHIPS UTILIZING A MATRIX	)	

APPELLANT'S BRIEF
(37 CFR §1.192)

Commissioner for Patents
Via E-File

Gentlemen:

This brief is in furtherance of the Notice of Appeal, filed in this case on August 14, 2008. The fees required under §1.17 for filing this brief are submitted herewith.

I. REAL PARTY INTEREST

The real party in interest is of the present application is KEN FORSSE.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences for this application, or any related pending applications.

III. STATUS OF CLAIMS

Claims 1, 3-10, 12-18, and 20-38 are pending in the application.

All of the claims 1, 3-10, 12-18, and 20-38 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

Claims 2, 11 and 19 have been cancelled. No claims have been allowed or objected to or withdrawn.

Accordingly, claims 1, 3-10, 12-18, and 20-38 are being appealed.

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the June 25, 2008 final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

_____The present invention is directed to a process for organizing and analyzing data by visually organizing informational concepts and relationships related to the data.

Claim 1 recites a process for organizing and analyzing data by visually organizing informational concepts and relationships related to the data, the steps comprising:

providing a matrix (20) having a primary cell (22) and two to seven secondary cells (22) surrounding the primary cell (page 7, lines 5-14, and as illustrated in FIGS. 1-8);

inserting a primary objective or subject data in the primary cell (page 7, lines 15-16);

inserting data related to the primary objective or data into the surrounding secondary cells (22) (page 7, lines 15-16 and page 8, lines 10-16);

interpreting and comprehending the primary objective or subject data by means of the organization of the related data in the surrounding secondary cells (22) (page 8, lines 13-16, and as illustrated in FIGS. 2-13);

inserting data from a surrounding secondary cell (22) into a primary sub-cell (24') (page 10, lines 21-30, and as illustrated in FIG. 1);

identifying features and characteristics of the data in the primary sub-cell (24') (page 10, lines 21-30, and as illustrated in FIG. 1);

inserting identified feature and characteristic data into two to seven surrounding

secondary sub-cells of the sub-matrix (page 10, lines 21-30, and as illustrated in FIG. 1);

wherein the inserting related data step includes the step of identifying features or characteristics of the primary objective or subject data (page 8, lines 11-16, page 9, lines 10-15, page 10, lines 21-30, and as illustrated in FIGS. 2-4, 7, 8, 9, 10, 11 and 12).

Independent Claim 16 recites a process for visually organizing informational concepts and relationships using a computer readable code embodied on a computer readable storage medium operable in connection with a computer (page 16, lines 26 - page 17, line 19, and FIG. 13), the steps comprising:

providing a matrix (20) having a primary cell (22) and six secondary cells (24) surrounding the primary cell (page 7, lines 5-14, and as illustrated in FIGS. 1-8);

inserting primary objective or subject data in the primary cell (page 7, lines 15-16);

identifying features or characteristics of the primary objective or subject data (page 7, lines 15-18, page 8, lines 10-16, page 9, lines 10-15, and FIGS. 4, 5, 7-12;

inserting identified feature or characteristic data into the surrounding secondary cells (page 7, lines 15-18, page 8, lines 10-16, page 9, lines 10-15, and FIGS. 4, 5, 7-12);

interpreting and comprehending the primary objective or subject by means of the organization of the feature or characteristic data in the surrounding secondary cells (page 7, lines 15-18, page 8, lines 10-16, page 9, lines 10-15, and FIGS. 4, 5, 7-12);

wherein data in the secondary cells are arranged such that dissimilar data are disposed in secondary cells on generally opposite sides of the primary cell (page 8, lines 17-28, and FIG. 3).

Independent claim 20 recites a process for visually organizing informational concepts and relationships, the steps comprising:

providing a matrix having a primary cell and six secondary cells surrounding the primary cell (page 7, lines 5-14, and as illustrated in FIGS. 1-8);

inserting known data or factors into the surrounding secondary cells (page 8, lines 8-16, page 9, lines 10-16, and FIG. 4);

comparing the known data or factors in the surrounding cells (page 8, lines 8-16, page 9, lines 10-16, and FIG. 4);

deriving primary objective or subject data based upon the comparison of the known data or factors (page 8, lines 8-16, page 9, lines 10-16, and FIG. 4); and

inserting the derived primary objective or subject data into the primary cell (page 8, lines 8-16, page 9, lines 10-16, and FIG. 4).

Independent claim 25 recites a process for visually organizing informational concepts and relationships, the steps comprising:

providing a matrix having a primary cell and six secondary cells surrounding the primary cell (page 7, lines 5-14, and as illustrated in FIGS. 1-8);

inserting primary objective or subject data in the primary cell (page 7, lines 15-16);

inserting data related to the primary objective or subject data into the

surrounding secondary cells (page 7, lines 15-18, page 8, lines 10-16, page 9, lines 10-15, and FIGS. 4, 5, 7-12);

providing a second matrix having a primary cell and six secondary cells surrounding the primary cell generally vertically aligned with the primary cell and secondary surrounding cells of the first matrix (page 11, lines 11-27, and FIG. 6);

inserting primary objective or subject data in the primary cell of the second matrix (page 11, lines 11-27, and FIG. 6);

inserting data related to the primary object or subject data into the surrounding secondary cells of the second matrix (page 11, lines 11-27, and FIG. 6); and

interpreting and comprehending the primary objective or subject of each matrix by means of the organization of the related data in the surrounding secondary cells (page 11, lines 11-27, and FIG. 6).

Independent claim 31 recites a process for visually organizing informational concepts and relationships, the steps comprising:

providing a matrix having a primary cell and six secondary cells surrounding the primary cell (page 7, lines 5-14, and as illustrated in FIGS. 1-8);

inserting primary objective or subject data in the primary cell (page 7, lines 15-16);

inserting data related to the primary objective or subject data into the surrounding secondary cells (page 7, lines 15-18, page 8, lines 10-16, page 9, lines 10-15, and FIGS. 4, 5, 7-12);

interpreting and comprehending the primary objective or subject by means of the

organization of the related data in the surrounding secondary cells (page 7, lines 15-18, page 8, lines 10-16, page 9, lines 10-15, and FIGS. 4, 5, 7-12);

cycling the matrix by removing related data from a surrounding secondary cell, and inserting new related data into at least one of the surrounding secondary cells (page 9, lines 23 - page 10, line 16, and FIG. 5); and

reinterpreting the primary objective or subject data by means of the organization of the related data in the surrounding secondary cells (page 9, lines 23 - page 10, line 16, and FIG. 5).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claim 1 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

2. Whether claim 3 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

3. Whether claim 4 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

4. Whether claim 5 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

5. Whether claim 6 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

6. Whether claim 7 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

7. Whether claim 8 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

8. Whether claim 9 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

9. Whether claim 10 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

10. Whether claim 12 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

11. Whether claim 13 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

12. Whether claim 14 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

13. Whether claim 15 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

14. Whether claim 16 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

15. Whether claim 17 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

16. Whether claim 18 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

17. Whether claim 20 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

18. Whether claim 21 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

19. Whether claim 22 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

20. Whether claim 23 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

21. Whether claim 24 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

22. Whether claim 25 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

23. Whether claim 26 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

24. Whether claim 27 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

25. Whether claim 28 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

26. Whether claim 29 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

27. Whether claim 30 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

28. Whether claim 31 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

29. Whether claim 32 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

30. Whether claim 33 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

31. Whether claim 34 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

32. Whether claim 35 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

33. Whether claim 36 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

34. Whether claim 37 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

35. Whether claim 38 is properly rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. (U.S. Patent No. 6,509,898) in view of Zhang (U.S. Patent No. 6,897,875).

VII. ARGUMENT

1. Rejection of Claim 1 Under 35 U.S.C. §103(a).

Claim 1 was rejected under 35 U.S.C. §103(a) as being unpatentable over Chi et al. in view of Zhang. According to independent claim 1, the invention comprises a process for organizing and analyzing data by visually organizing informational concepts and relationships related to the data. This includes the steps of providing a matrix having a primary cell and two to seven secondary cells surrounding the primary cell. Primary objective or subject data is inserted in the primary cell. Data related to the primary objective or subject data is inserted into the surrounding secondary cells. The primary objective or subject data is interpreted and comprehended by means of the organization of the related data in the surrounding secondary cells. Further in accordance with claim 1, data from a surrounding secondary cell is inserted into a primary sub-cell of a sub-matrix of the matrix (as seen in FIG. 1, and as explained in the Specification beginning on page 10, line 17 - page 11, line 11). Features and characteristics of the data in the primary sub-cell are identified, and the identified feature and characteristic data is inserted into two to seven surrounding secondary sub-cells of the sub-matrix. The inserting related data step includes the step of identifying features or characteristics of the primary objective or subject data.

Chi et al., as described in the Abstract, and throughout the patent, is directed to a method for generating a tree structure representation of a generalized graph structure, to be used in creating a visual display which assists a layout or structure of a worldwide web web-site. More particularly, in column 1, lines 55-60, Chi describes a

web-site analyst's increasing desire to discover and understand user access patterns, and relationships between web-page contents, so as to efficiently structure the web-site topology. Moreover, Chi discusses that conventional web-site display methods do not generate a structure to be displayed from the generalized graph structure, and that no conventional system modifies the positioning of nodes based within a displayed structure upon the nodes usage. Thus, Chi is directed to the creation of a node-based tree structure graph in which the focus is upon node (web-page, documents obtained from the web-site, etc.) usage. Chi, in column 2, lines 50-55, discuss that in their graph creation, the visitation order is determined by visiting the highest used nodes first. Thus, the child nodes are visited in order of decreasing usage parameters as one extends outwardly from the central node. Thus, popular web-pages are favored over less popular ones. In accordance with Chi, the root node (most used and accessed node) is positioned in the center of the layout, with increasingly less visited or used nodes at increasing distances away from the central root node. The high traffic areas are concentrated near the root node, and as the document or web-page gets farther and farther away from the root node, the document or web-page (in the form of a child node) has a lesser possibility of being accessed. This assists the web-site designer in designing and arranging the web-site such that the most accessed web-pages, documents, etc. (nodes) are more readily accessible, such as being placed on the home page, or having quick and direct links to obtain these web-pages or documents by the end user.

There is no discussion, teaching, or inference whatsoever in Chi et al. of interpreting and comprehending the primary objective or subject data in the primary cell by means of the organization of the related data in the surrounding secondary cells. This is due to the fact that the primary or root node is known as that web-page or document, etc. which is most used. The hierarchy is to arrange the nodes from this root node (most accessed document, web-page, etc.) to those that are less visited or needed. Thus, there is nothing to interpret or comprehend by the means of the organization of the related data in the secondary cells as the primary objective or subject data in the root node is already known, and must be known in order to arrange the remaining secondary nodes outwardly from the central node.

Moreover, there is absolutely no teaching, inference or suggestion of inserting data from a surrounding secondary cell into a primary sub-cell of a sub-matrix of the matrix, as illustrated in FIG. 1 of the Specification. There is no teaching, inference or suggestion of identifying features and characteristics of the data in the primary sub-cell, and inserting the identified feature and characteristic data into two to seven surrounding secondary sub-cells of the sub-matrix.

In the June 25, 2008 Office Action, on page 20, the Examiner responded that "Chi discloses a breadth first traversal transforms the web graph into a tree by placing a node as closely to the root node as possible a bus for transporting data between various elements. The bus typically includes data, address, and control signals (column 5, lines 9-11 & 51-61). Additionally, Chi discloses derived usage information (column 8, line 36) and derived usage parameters such as need probability, cocitation clustering,

or functions of both node and link usages can alternatively be referenced (column 3, lines 23-24)." Applicant finds this rebuttal incomprehensible. Moreover, applicant fails to see how this rebuttal shows in any manner that Chi discloses the steps of independent claim 1, particularly with respect to the sub-cell and sub-matrix recitation steps.

Zhang is directed to a method and system for analysis and visualization of multi-dimensional biological data. By multi-dimensional, it is clear that Zhang means the x and y axes, by the creation of rows and columns. Zhang is directed to handling and analyzing vast quantities of genome sequencing data. In columns 2-5, Zhang discusses various statistical models that were in use at the time of his invention, including Self-Organizing Map (SOM), Feed-Forward Neural Networks, Hierarchal Artificial Neural Networks, Cluster Data Modeling and the like. Zhang discusses the creation of a matrix of clustered multi-dimensional biological data in the form of map units having a geometry that entirely fill the space, such as squares or hexagons. The prior art data clustering techniques are used to cluster and organize the map units of biological data. The Zhang invention then shades and colors the individual map units according to a value of a select component of the data cluster represented by the map unit to provide a visualization of the biological data. Zhang teaches the shading can be of color (red, green, blue, yellow, etc.) and hue (brightness, darkness/lightness, or gray scale). Thus, Zhang is directed to the shading or coloring of map units which have been clustered and organized into rows and columns by prior art methodologies. More

particularly, the map units are specifically directed to biological data, such as genome sequencing data.

Zhang does not overcome the deficiencies in Chi in that it does not interpret or comprehend the primary objective or subject data in a primary cell by means of the organization of the related data in the two to seven surrounding secondary cells. Instead, as illustrated in Figs. 1, 4, 6, etc. the shading or coloring of the data in the map units shows clusters of related data.

Moreover, Zhang fails to disclose, teach, or even infer of inserting the data from a surrounding secondary cell of the primary cell into a primary sub-cell of a sub-matrix of the matrix, identifying features and characteristics of the data in the primary sub-cell, and inserting the identified feature and the characteristic data into two to seven surrounding secondary sub-cells of the sub-matrix.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references when combined must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure. M.P.E.P. §2143 (citing *In re Vaeck*, 20 USPQ 2d 1438 (Fed.Cir. 1991).

Applicant respectfully asserts that there is no motivation or suggestion in the Chi and Zhang references to modify or combine the reference teachings as has been proposed by the Examiner. Chi et al. is directed to the creation of a tree graph structure with a root node representing the most used document, web-page, etc. and the nodes extending outwardly in a radial fashion therefrom representing documents, web-pages and the like which are less visited or used. Zhang, on the other hand, is directed to the creation of columns and rows of map units representing genome sequencing or other biological data, and which are colored in accordance with the process of Zhang so as to enable visual realization of clusters of identical or similar data. The teachings of Chi et al. and Zhang are only analogous to one another given the teachings of the present application, otherwise, the references are completely non-analogous. Of course, it is axiomatic that a claimed invention is not obvious solely because it is composed of elements that are individually found in the prior art. *Life Technologies, Inc. v. Clonetech Laboratories, Inc.*, 56 USPQ 2d 1186 (Fed. Cir. 2000).

To establish a *prima facie* case of obviousness, there must be a reasonable expectation of success of the modification or combination of the references. However, applying the coloring method of Zhang to Chi et al. would simply create either a bulls-eye pattern, or a banded pattern beginning from the top to the bottom of the nodes of Chi et al., and would not arrive at the present invention and would have no utility with respect to Chi et al.

Finally, the combination of Chi and Zhang fail to teach or suggest all of the claim limitations, as indicated above.

Accordingly, applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness in rejecting independent claim 1 based on the Chi et al. and Zhang references.

2. Rejection of Claim 3 Under 35 U.S.C. §103(a).

Claim 3 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 3 recites the step of identifying the primary objective or subject data based upon a comparison of the related data in the surrounding secondary cells. Such is illustrated in FIG. 4 of the Specification. Chi et al. do not describe the step of identifying the primary objective or subject data based upon a comparison of the related data in the surrounding secondary cells. Instead, Chi et al. describes a methodology wherein the root node (primary cell) information is known as the most used or visited. Those documents, web-pages, etc. representing other nodes which are less visited or used extend outwardly from the central node.

There is absolutely no discussion whatsoever of identifying primary objective or subject data based upon a comparison of the related data in the surrounding secondary cells in Zhang.

3. Rejection of Claim 4 Under 35 U.S.C. §103(a).

Claim 4 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 4, which depends from claim 3, recites that the related data comprises features or characteristics of the primary objective or subject data. Neither Chi et al. nor Zhang discloses comparing the related data, in the form of features or

characteristics of the primary objective or subject data, in order to identify the primary objective or subject data.

4. **Rejection of Claim 5 Under 35 U.S.C. §103(a).**

Claim 5 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 5 recites that the number of surrounding secondary cells is six. There is no teaching or suggestion or inference in Chi et al. that the number of surrounding secondary cells from the primary cell be six. Zhang discloses that the map units are hexagonal, so as to not create any space between the adjoining map units, so as to create a continuous map. However, Zhang is organized in columns and rows of such map units, and whether the map units or hexagon or square, octagon, etc. is of no importance. In the present invention, as described on page 7, lines 1-11, the number of secondary cells surrounding the primary cell is six, so as to maximize the amount of information that can be readily interpreted and understood. As described in the Specification, using fewer than six secondary cells may prove to be insufficient, while the number of secondary cells exceeding six becomes difficult to manage and remember. This is not disclosed or inferred whatsoever in Chi et al. or Zhang.

5. **Rejection of Claim 6 Under 35 U.S.C. §103(a).**

Claim 6 recites that the primary cell and surrounding cells are hexagonal. Once again, Chi et al. fails to disclose or even suggest this arrangement. However, although Zhang discloses the use of hexagons as map units, it is for an entirely different purpose.

6. **Rejection of Claim 7 Under 35 U.S.C. §103(a)**.

Claim 7 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 7 recites the step of layering multiple matrices, each matrix having a primary cell containing primary objective or subject data and two to seven secondary cells including data related to the primary objective or subject date, as illustrated in FIG. 6, and as described on page 11, lines 11-27. On page 8 of the Office Action, the Examiner states "Data outputs are also formed in a matrix. For instance, SOM of the yeast diauxic data was performed to cluster genes 256 neurons on a two-dimensional (16.times.16) grid; the output matrix was organized to contain 256 rows (map units) and seven columns. Each row represents a group of genes, each column represents a sample, and each cell contains a numerical value representing the average transcriptional level of the genes grouped to the corresponding unit over the particular sample. This is illustrated by the following output matrix; (col 13, lines 38-43), Zhang]."

Applicant fails to see how the combination of Chi and Zhang disclose the step of layering multiple matrices, wherein each matrix has a primary cell containing primary objective or subject data and two to second secondary cells including data related to the primary objective or subject data. In fact, neither Chi et al. nor Zhang disclose these steps and are not arranged in this fashion.

7. **Rejection of Claim 8 Under 35 U.S.C. §103(a)**.

Claim 8 depends from claim 7, and recites that six secondary cells surround the primary cell. This has been addressed above, in that Chi et al. does not disclose this step, and Zhang provides hexagons for a completely different purpose.

8. Rejection of Claim 9 Under 35 U.S.C. §103(a).

Claim 9 depends from claim 8 and recites that the primary cell and the surrounding secondary cells in each matrix (which are layered in accordance with claim 7) are hexagonal. Neither Chi et al. or Zhang disclose such an arrangement.

9. Rejection of Claim 10 Under 35 U.S.C. §103(a).

Claim 10, which depends from claim 7, recites the step of assigning the primary cell of each matrix (in the layered multiple matrices) the same objective or subject data, and wherein the surrounding secondary cells of each layer are vertically interchangeable. Neither Chi et al. nor Zhang disclose the step of layering multiple matrices, each matrix having a primary cell containing the same primary objective or subject data, and wherein the data in the surrounding secondary cells of each layer are vertically interchangeable. The fact that Zhang discloses map units in the form of hexagons and the fact that the map is organized in such a way that related patterns are placed in nearby neighboring map units so as to produce a smooth transition of patterns over the entire map has absolutely no bearing or relevance to the recitations of claim 10. Once again, neither Chi et al. nor Zhang disclose the layering of multiple matrices, such that the primary cell of each layered matrix contains the same objective or subject data, and wherein the data in the secondary cells of each layer are vertically interchangeable.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. M.P.E.P. §2143.03 (citing *In re Royka*, 180 USPQ 580 (CCPA 1974). All words in a claim must be considered in

judging the patentability of that claim against the prior art. *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970)).

10.-11. Rejection of Claims 12 and 13 Under 35 U.S.C. §103(a).

Claims 12 and 13 were rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 12 depends from claim 1, and recites that the number of surrounding secondary sub-cells in the sub-matrix is six. Claim 13, which depends from claim 12, recites that the primary cell and the secondary sub-cells in the sub-matrix are hexagonal (as can be seen in FIG. 1).

As described above, neither Chi et al. nor Zhang provide any disclosure or teaching whatsoever of a sub-matrix having sub-cells in accordance with claim 1. Thus, the fact that Zhang provides map units which are hexagonal in nature so as to form a smooth and continuous map without any space between the map units does not arrive to making claims 12 nor 13 obvious. The fact that Chi discloses a tree structure to accomplish its goal of displaying a path from every node to every other node (which is the argument presented by the Examiner on page 10 of the Office Action) does not arise to a teaching or rendering of obvious of these recitations.

12. Rejection of Claim 14 Under 35 U.S.C. §103(a).

Claim 14 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 14 recites the step of creating a cyclic matrix by removing related data from a surrounding secondary cell and inserting new related data into at least one of the surrounding secondary cells, as is illustrated in FIG. 5, and the related description, of the Specification of the application.

On page 11 of the Office Action, the Examiner asserts that the Chi layout algorithm "runs in two passes. In the first pass, the algorithm traverses the entire hierarchy using post-order traversal. At each node, the algorithm calculates the number of leaf nodes in that sub-tree. So the total number of leaves in the tree is known. The algorithm then calculates the amount of angular space to be allocated for each leaf node (360) degrees divided by the total number of leaves). In the second pass, the algorithm traverses the hierarchy using breadth-first traversal. At each node, it allocates the amount of angular space for that node by looking to see how many leaf nodes are rooted at that sub-tree. In this manner, each leaf node is guaranteed a fixed amount of angular space; (col 05, lines 15-18), Chi]."

Applicant fails to see how this disclosure of Chi teaches or infers the step recited in claim 14. In fact, applicant respectfully asserts that Chi discloses just the opposite of that recited in claim 14, in that Chi makes two passes which applies different information at each node. In contrast, the present invention removes related data from a surrounding secondary cell and inserts new related data into at least one of the surrounding secondary cells. The primary cell data is not changed. Nor is all of the surrounding secondary cell data, but instead only related data from a surrounding secondary cell is removed so as to be able to insert new related data into one of the surrounding secondary cells.

13. Rejection of Claim 15 Under 35 U.S.C. §103(a).

Claim 15 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 15 depends from claim 1, and recites that the related data are

arranged such that dissimilar related data are disposed in secondary cells on generally opposite sides of the primary cell.

On page 12 of the Office Action, the Examiner cites to column 14, lines 57-59 and column 18, line 18 of Chi to assert that Chi provides this teaching. However, column 14, lines 57-59 discusses rankings of sibling nodes sorted by their usage parameters. That is, Chi refers to its Fig. 15. However, the root node 1501 would be the equivalent of applicant's primary cell. Node 1590 of Fig. 15 of Chi represents the next highest used node, and node 1510 represents the lowest used node. In the teaching opposite to that of the invention, node 1580 of Fig. 15 of Chi represents the node (web-page document, etc.) which is the next most visited or used than node 1590. Thus, Chi actually teaches of arranging the data such that similar related data are disposed in secondary cells on generally opposite sides of the primary cell. This is directly opposite the recitation of claim 15.

Zhang provides no such teaching, disclosure or even inference of arranging dissimilar related data in secondary cells on generally opposite sides of the primary cell.

14. Rejection of Claim 16 Under 35 U.S.C. §103(a).

Claim 16 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang.

Independent claim 16 recites a process for visually organizing informational concepts and relationships using a computer readable code embodied on a computer readable storage medium operable in connection with a computer. The steps comprise providing a matrix having a primary cell and six secondary cells surrounding the primary

cell. Primary objective or subject data is inserted in the primary cell. Features or characteristics of the primary objective or subject data are identified, and the identified feature or characteristic data is inserted into the surrounding secondary cells. The primary objective or subject is interpreted and comprehended by means of the organization of the feature or characteristic data in the surrounding secondary cells. More particularly, data in the secondary cells are arranged such that dissimilar data are disposed in secondary cells on generally opposite sides of the primary cell.

The same arguments made with respect to claim 15 are applicable in claim 16. That is, Chi et al. actually teach away from the arrangement recited in claim 16. Instead of arranging data in the secondary cell such that dissimilar data are disposed in secondary cells on generally opposite sides of the primary cell, Chi et al. disclose arranging data in the secondary cells such that similar data are disposed in secondary cells on generally opposite sides of the primary cell. Similarly, Zhang discloses that similar map units are clustered, and such clustering can be viewed when applying the colorization methodology of Zhang.

Thus, Chi et al. and Zhang fail to disclose all of the claim limitations of claim 16, and thus a *prima facie* case of obviousness for claim 16 has not been met.

15. Rejection of Claim 17 Under 35 U.S.C. §103(a).

Claim 17 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 17, which depends from independent claim 16, recites that the primary cell and the surrounding secondary cells are hexagonal. Aside from being

allowable due to the fact that independent claim 16 is allowable, the same arguments which were made above with respect to claims 6 and 9 apply here.

16. Rejection of Claim 18 Under 35 U.S.C. §103(a).

Claim 18, which depends from claim 16, was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 18 recites the steps of inserting the data from a surrounding secondary cell into a primary sub-cell of a sub-matrix, and identifying features and characteristics of the data in the primary sub-cell and inserting identified feature and characteristic data into six surrounding secondary sub-cells of the sub-matrix. Aside from being allowable due to the allowability of independent claim 16, claim 18 is also allowable for the same reasons mentioned above with respect to independent claim 1, the contents of the argument being incorporated herein.

17. Rejection of Claim 20 Under 35 U.S.C. §103(a).

Independent claim 20 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 20 recites a process for visually organizing informational concepts and relationships, the steps comprising providing a matrix having a primary cell and six secondary cells surrounding the primary cell. Known data or factors are inserted into the surrounding secondary cells. The known data or factors in the surrounding cells are compared, and primary objective or subject data is derived based upon the comparison of the known data or factors. The derived primary objective or subject data is inserted into the primary cell.

On page 13 of the Office Action, the Examiner admits that Chi fails to disclose providing a matrix having a primary cell and six secondary cells surrounding the primary

cell; and deriving primary objective or subject data based upon the comparison of the known data or factors, and inserting the derived primary objective or subject data into the primary cell.

Instead, the Examiner argues that:

> "On the other hand, Zhang discloses providing a matrix having a primary cell and six secondary cells surrounding the primary cell; [the map units are depicted as hexagonal cells, each touching six other neighboring map units wherein primary cell is hexagonal cells that are surrounding by other six unit cells; (Col 08, lines 50), Zhang] and deriving primary objective or subject data based upon the comparison of the known data or factors; [This is strongly implicated by the abundance of many specific transcription factors, transcriptional suppressors and histone deacetylases in neuroepithelial cells; (Col 24, lines 63-65), Zhang] and inserting the derived primary objective or subject data into the primary cell; [To generate gene-specific sequences corresponding to each clone, vector-specific primers were used to direct recover inserts from individual bacterial clones by PCR. Each PCR reaction was examined by gel electrophoresis to ensure good quality as well as a sufficient yield of PCR products; (Col 21, lines 64-66), Zhang]. Chi and Zhang are analogous art because they are from the same field of endeavor of Process for Visually Organizing Information Concept and Relationships Utilizing a Matrix.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the content trial system as described by Chi by using providing a matrix having a primary cell and six secondary cells surrounding the primary cell; and deriving primary objective or subject data based upon the comparison of the known data or factors; and inserting the derived primary objective or subject data into the primary cell as taught by Zhang.

Therefore, it would have been obvious to one of ordinary skill in the art at the - time the invention was made to combine the teachings of Chi with the teachings of Zhang, inserting known data or factors into the surrounding secondary cells; comparing the known data or factors in the surrounding cells, would incorporate the use of providing a matrix having a primary cell and six secondary cells surrounding the primary cell; and deriving primary objective or subject data based upon the comparison of the known data or factors; and inserting the derived primary objective or subject data into the primary cell as disclosed by Zhang. The motivation being to permit viewing of the clustered data based on the components of the modeled data, such as the component of time in a time course, temperature of the reaction, intensity of the output, quantity of a reagent, or an empirical parameter, allow appreciation of relationships between the data that may not be apparent from inspection of the full data modeling output; as suggested by Zhang (col 05, lines 01-03)."

Notwithstanding the foregoing argument by the Examiner, there is no teaching whatsoever in Zhang of creating a matrix in which a primary cell devoid of data or information has six surrounding secondary cells which include known data or factors, and comparing the known data or factors in the surrounding cells to derive the primary objective or subject data, which is subsequently inserted into the primary cell. Instead, Zhang discloses that each of the map units contains data or information. Zhang applies its methodology of colorization or gray scaling so that the cluster and patterns of information are readily visualized. As can be seen in the figures of Zhang, such colorization creates large swaths and areas of similarly colored or hued data, representing multiple map units typically adjacent to one another.

Applicant fails to see how the combination of Chi et al. and Zhang, neither of which teaches the steps of independent claim 20, could render independent claim 20 obvious. The Office Action may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

18. Rejection of Claim 21 Under 35 U.S.C. §103(a).

Claim 21 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 21, which depends from independent claim 20, recites that the known data or factors comprise features or characteristics of the primary objective or subject data. For the same reasons that independent claim 20 is allowable and patentable over the Chi and Zhang references, claim 21 is as Chi and Zhang fail to

disclose comparing features or characteristics provided in surrounding secondary cells to derive the primary objective or subject data to be inserted into the primary cell.

19. Rejection of Claim 22 Under 35 U.S.C. §103(a).

Claim 22 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 22, which depends from independent claim 20, recites that the primary cell and the surrounding secondary cells are hexagonal. This appears to be the only teaching that the Zhang reference has in common with the present invention. Otherwise, Zhang appears to be completely unrelated both to the present invention, and to the Chi et al. patent. Of course, the fact that Zhang conveniently creates hexagonal map units so as to ensure that the map units are immediately adjacent to one another without any space therebetween is of no consequence to either Chi et al. nor the present invention.

20. Rejection of Claim 23 Under 35 U.S.C. §103(a).

Claim 23 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 23, which depends from independent claim 20, recites the steps of inserting the data or factor from a surrounding secondary cell into a sub-primary cell of a sub-matrix, and identifying features and characteristics of the sub-primary cell data and inserting identified feature and characteristic data into six surrounding secondary sub-cells of the sub-matrix. As described above with respect to claims 1 and 12, Chi et al. and Zhang fail to provide the necessary teachings and disclosure to render such steps obvious and unpatentable.

21. **Rejection of Claim 24 Under 35 U.S.C. §103(a).**

Claim 24 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 24, which depends from independent claim 20, recites that data or factors in the secondary cells are arranged such that dissimilar data or factors are disposed in secondary cells on generally opposite sides of the primary cell. This arrangement and step has been discussed above with respect to claims 15 and 16, and claim 24 is patentably distinct from Chi et al. and Zhang for the same reasons.

22. **Rejection of Claim 25 Under 35 U.S.C. §103(a).**

Independent claim 25 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 25, recites a process for visually organizing informational concepts and relationships. The process comprises the steps of providing a matrix having a primary cell and six secondary cells surrounding the primary cell. Primary objective or subject data is inserted in the primary cell. Data related to the primary objective or subject data is inserted into the surrounding secondary cells. A second matrix having a primary cell and six secondary cells surrounding the primary cell is provided generally vertically aligned with the primary cell and secondary surrounding cells of the first matrix. Primary objective or subject data is inserted in the primary cell of the second matrix. Data related to the primary object or subject data is inserted into the surrounding secondary cells of the second matrix. The primary objective or subject of each matrix is interpreted by means of the organization of the related data in the surrounding secondary cells.

The same arguments made with respect to claim 7 above are hereby incorporated by reference and apply to independent claim 25. That is, neither Chi et al. nor Zhang disclose providing a first matrix (primary cell with six secondary cells) vertically aligned with a second matrix (also having a primary cell and six secondary cells) as illustrated in FIG. 6 of the Specification, and related description. Independent claim 25 recites a three-dimensional structure, that is two matrices layered or vertically aligned with one another. Chi et al. and Zhang are directed to two-dimensional representations. Furthermore, neither Chi et al. nor Zhang disclose the vertical alignment of two such matrices, as argued above with respect to claim 7.

In response to the Examiner's arguments on page 21 of the Office Action, Chi does disclose a vertical slice (column 9, line 4). However, this "vertical slice" looks at a single parent node and the children or sibling nodes relating to that parent node. The flow and activation matrices that Chi discloses essentially form what appears to be a pine tree or a Christmas tree structure with a root node or parent node at the top, and descending in a generally triangular configuration with children or sibling nodes thereunder, in priority according to usage as taught by Chi et al. Chi specifically states that it has "no occlusion problems since the entire layout lies in a two dimensional plane" (column 5, lines 33-34). Any third dimension can be assigned to time or a three-dimensional glyph at each node. However, adding a time dimension or a glyph at each node is not the same as vertically aligning first and second matrices such that the primary cells and secondary cells of each are generally vertically aligned with one another.

23. Rejection of Claim 26 Under 35 U.S.C. §103(a).

Claim 26 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 26, which depends from claim 25, recites that the inserting related data step of claim 25 includes the step of identifying features or characteristics of the primary objective or subject data. Chi et al. does not describe the creation of its graphs as such, but instead is entirely usage or access based, with the most used web-page, documents, etc. representing the parent or root node, and the nodes which are linked thereto represent web-pages, documents, etc. which are not accessed or used as often.

24. Rejection of Claim 27 Under 35 U.S.C. §103(a).

Claim 27, which depends from claim 25, recites that the primary cell and the surrounding secondary cells are hexagonal. The arguments with respect to the claims above in this respect are incorporated herein by reference, and applicant once again asserts that the hexagonal nature of the map units of Zhang are for an entirely different purpose than that of the present invention and are not readily combinable with Chi et al.

25. Rejection of Claim 28 Under 35 U.S.C. §103(a).

Claim 28 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 28, which is dependent from claim 25, recites the step of assigning the primary cell of the second matrix the same objective or subject data as the first matrix, and wherein the surrounding secondary cells of each matrix are vertically interchangeable. The assertions made on page 16 of the Office Action with respect to claim 28 are incomprehensible with respect to the recitations of claim 28.

There is absolutely no teaching or discussion in Chi et al. or Zhang of providing first and second matrices in vertical alignment with one another, and assigning the primary cell of both the first and second matrix the same objective or subject data, with the surrounding secondary cell data of each matrix being vertically interchangeable. Chi is directed to a flattened-out tree structure, in the form of a central node having expanding circular nodes to form a graph. Zhang discloses a two-dimensional graph of rows and columns of map units. Neither of these references disclose first and second matrices which are vertically aligned with one another so as to create a three-dimensional graph or matrix. Neither of these references disclose that the primary objective or subject data be common between the two vertically aligned, layered, matrices. Neither of these references disclose that the data within the secondary cells can be vertically interchangeable with the matrix immediately above or below the secondary cell. Thus, Chi et al. and Zhang, either alone or in combination with one another, fail to render obvious the recitations of claim 28.

26. Rejection of Claim 29 Under 35 U.S.C. §103(a).

Claim 29 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 29 recites the steps of inserting the data from a surrounding secondary cell into a primary sub-cell of a sub-matrix, and identifying features and characteristics of the primary data and inserting identified feature and characteristic data into six surrounding secondary sub-cells of the sub-matrix. Aside from being allowable for being dependent upon independent claim 25, which is allowable, claim 29

is allowable for the same reasons that were indicated and argument above with respect to claims 1 and 7.

27. Rejection of Claim 30 Under 35 U.S.C. §103(a).

Claim 30 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 30, which depends from claim 25, recites that the data in the secondary cells are arranged such that dissimilar data are disposed in secondary cells on generally opposite sides of the primary cell. Claim 30 is allowable for the same reasons indicated above with respect to claim 15 and 16.

28. Rejection of Claim 31 Under 35 U.S.C. §103(a).

Claim 31 stands rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 31 recites a process for visually organizing informational concepts and relationships. The steps comprise providing a matrix having a primary cell and six secondary cells surrounding the primary cell. Primary objective or subject data is inserted in the primary cell. Data related to the primary objective or subject data is inserted into the surrounding secondary cells. The primary objective or subject data is interpreted and comprehended by means of the organization of the related data in the surrounding secondary cells. The matrix is cycled by removing related data from a surrounding secondary cell, and inserting new related data into at least one of the surrounding secondary cells, and the primary objective or subject data is reinterpreted by means of the organization of the related data in the surrounding secondary cells.

Appellant has described above in connection with claim 14 the reasons why neither Chi et al. nor Zhang disclose the step of cycling the matrix by removing related

data from a surrounding secondary cell and inserting new data into at least one of the surrounding secondary cells, so as to reinterpret the primary or objective data. Both Chi et al. and Zhang are completely devoid of any teaching or suggestion of taking this step. Accordingly, independent claim 31 is not obvious in light of these references, and should be allowed.

29. Rejection of Claim 32 Under 35 U.S.C. §103(a).

Claim 32 was rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 32 recites that the inserting related data step of claim 31 includes the step of identifying features or characteristics of the primary objective or subject data. As described above in Chi et al., the central or root node is the node which represents the web-page, document, etc. which is most frequently used or accessed. Other web-pages, documents and information, etc. which is not accessed or used as often is put in nodes which extend either downwardly or radially from the root, central, or parent node in Chi et al. Chi et al. does not identify features or characteristics of the primary objective or subject data nor does it insert data related to the primary objective or subject data into the surrounding secondary cells. Instead, the only analysis is frequency of usage or access. Similarly, Zhang does not identify features or characteristics of primary objective or subject data in a primary cell so as to place that data into surrounding secondary cells. Instead, the data is provided and inserted into a map unit, and Zhang colors all of the map units to show clusters or patters of similar data.

30. Rejection of Claim 33 Under 35 U.S.C. §103(a).

Claim 33 stands rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 33 recites that the primary cell and the surrounding secondary cells are hexagonal. This has been addressed with respect to various claims above, and is allowable for the same reason as those arguments and those claims, as well as the fact that claim 33 depends from claim 31, which is allowable.

31. Rejection of Claim 34 Under 35 U.S.C. §103(a).

Claim 34 stands rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claim 34 depends from independent claim 31, and recites the steps of inserting the data from a surrounding secondary cell into a primary sub-cell of a sub-matrix, and identifying features and characteristics of the data in the primary sub-cell and inserting identified feature and characteristic data into six surrounding secondary sub-cells of the sub-matrix. This is illustrated in FIG. 1 of the Specification, and claim 34 is allowable for the same reason as claims 1 and 7 above.

32.-35. Rejection of Claims 35-38 Under 35 U.S.C. §103(a).

Claims 35-38 stand rejected under §103(a) as being unpatentable over Chi et al. in view of Zhang. Claims 35-38 depend from each of the independent claims 1, 20, 25 and 31, respectively. These claims recite that the process for visually organizing informational concepts and relationships is performed using a computer readable code embodied on a computer readable storage medium operable in connection with a computer. These claims are allowable for the same reasons indicated above with respect to their particular independent claim. If an independent claim is non-obvious

under 35 U.S.C. 103, then any claim depending therefrom is non-obvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

36. Conclusion.

In light of the above arguments, appellant's attorney respectfully submits that the cited references do not render obvious the claimed invention. More specifically, appellant's claims recite novel combinations of steps which patentably distinguish over any and all references under 35 U.S.C. §103(a), and particularly the cited Chi et al. and Zhang references.

As a result, a decision by the Board of Patent Appeals and Interferences reversing the Examiner and directing allowance of the pending claims in the subject application is respectfully solicited.

VIII. CLAIMS APPENDIX

1. A process for organizing and analyzing data by visually organizing informational concepts and relationships related to the data, the steps comprising:

providing a matrix having a primary cell and two to seven secondary cells surrounding the primary cell;

inserting primary objective or subject data in the primary cell;

inserting data related to the primary objective or subject data into the surrounding secondary cells;

interpreting and comprehending the primary objective or subject data by means of the organization of the related data in the surrounding secondary cells;

inserting the data from a surrounding secondary cell into a primary sub-cell of a sub-matrix of the matrix;

identifying features and characteristics of the data in the primary sub-cell; and

inserting identified feature and characteristic data into two to seven surrounding secondary sub-cells of the sub-matrix;

wherein the inserting related data step includes the step of identifying features or characteristics of the primary objective or subject data;

3. The process of claim 1, including the step of identifying the primary objective or subject data based upon a comparison of the related data in the surrounding secondary cells.

4. The process of claim 3, wherein the related data comprises features or characteristics of the primary objective or subject data.

5. The process of claim 1, wherein the number of surrounding secondary cells is six.

6. The process of claim 5, wherein the primary cell and the surrounding cells are hexagonal.

7. The process of claim 1, including the step of layering multiple matrices, each matrix having a primary cell containing primary objective or subject data and two to seven secondary cells including data related to the primary objective or subject data.

8. The process of claim 7, wherein six secondary cells surround the primary cell.

9. The process of claim 8, wherein the primary cell and the surrounding secondary cells in each matrix are hexagonal.

10. The process of claim 7, including the step of assigning the primary cell of each matrix the same objective or subject data, and wherein the surrounding secondary cells of each layer are vertically interchangeable.

12. The process of claim 1 , wherein the number of surrounding secondary sub-cells in the sub-matrix is six.

13. The process of claim 12, wherein the primary cell and the surrounding secondary sub-cells in the sub-matrix are hexagonal.

14. The process of claim 1, including the step of creating a cyclic matrix by removing related data from a surrounding secondary cell and inserting new related data into at least one of the surrounding secondary cells.

15. The process of claim 1, wherein related data are arranged such that dissimilar related data are disposed in secondary cells on generally opposite sides of the primary cell.

16. A process for visually organizing informational concepts and relationships using a computer readable code embodied on a computer readable storage medium operable in connection with a computer, the steps comprising:

providing a matrix having a primary cell and six secondary cells surrounding the primary cell;

inserting primary objective or subject data in the primary cell;

identifying features or characteristics of the primary objective or subject data;

inserting identified feature or characteristic data into the surrounding secondary cells; and

interpreting and comprehending the primary objective or subject by means of the organization of the feature or characteristic data in the surrounding secondary cells;

wherein data in the secondary cells are arranged such that dissimilar data are disposed in secondary cells on generally opposite sides of the primary cell.

17. The process of claim 16, wherein the primary cell and the surrounding secondary cells are hexagonal.

18. The process of claim 16, including the steps of inserting the data from a surrounding secondary cell into a primary sub-cell of a sub-matrix, and identifying features and characteristics of the data in the primary sub-cell and inserting identified feature and characteristic data into six surrounding secondary sub-cells of the sub-matrix.

20. A process for visually organizing informational concepts and relationships, the steps comprising:

providing a matrix having a primary cell and six secondary cells surrounding the primary cell;

inserting known data or factors into the surrounding secondary cells;

comparing the known data or factors in the surrounding cells; and

deriving primary objective or subject data based upon the comparison of the known data or factors; and

inserting the derived primary objective or subject data into the primary cell.

21. The process of claim 20, wherein the known data or factors comprise features or characteristics of the primary objective or subject data.

22. The process of claim 20, wherein the primary cell and the surrounding secondary cells are hexagonal.

23. The process of claim 20, including the steps of inserting the data or factor from a surrounding secondary cell into a sub-primary cell of a sub-matrix, and identifying features and characteristics of the sub-primary cell data and inserting identified feature and characteristic data into six surrounding secondary sub-cells of the sub-matrix.

24. The process of claim 20, wherein data or factors in the secondary cells are arranged such that dissimilar data or factors are disposed in secondary cells on generally opposite sides of the primary cell.

25. A process for visually organizing informational concepts and relationships, the steps comprising:

providing a matrix having a primary cell and six secondary cells surrounding the primary cell;

inserting primary objective or subject data in the primary cell;

inserting data related to the primary objective or subject data into the surrounding secondary cells;

providing a second matrix having a primary cell and six secondary cells surrounding the primary cell generally vertically aligned with the primary cell and secondary surrounding cells of the first matrix;

inserting primary objective or subject data in the primary cell of the second matrix;

inserting data related to the primary object or subject data into the surrounding secondary cells of the second matrix; and

interpreting and comprehending the primary objective or subject of each matrix by means of the organization of the related data in the surrounding secondary cells.

26. The process of claim 25, wherein the inserting related data step includes the step of identifying features or characteristics of the primary objective or subject data.

27. The process of claim 25, wherein the primary cell and the surrounding secondary cells are hexagonal.

28. The process of claim 25, including the step of assigning the primary cell of the second matrix the same objective or subject data as the first matrix, and wherein the surrounding secondary cells of each matrix are vertically interchangeable.

29. The process of claim 25, including the steps of inserting the data from a surrounding secondary cell into a primary sub-cell of a sub-matrix, and identifying features and characteristics of the primary data and inserting identified feature and characteristic data into six surrounding secondary sub-cells of the sub-matrix.

30. The process of claim 25, wherein data in the secondary cells are arranged such that dissimilar data are disposed in secondary cells on generally opposite sides of the primary cell.

31. A process for visually organizing informational concepts and relationships, the steps comprising:

providing a matrix having a primary cell and six secondary cells surrounding the primary cell;

inserting primary objective or subject data in the primary cell;

inserting data related to the primary objective or subject data into the surrounding secondary cells;

interpreting and comprehending the primary objective or subject by means of the organization of the related data in the surrounding secondary cells;

cycling the matrix by removing related data from a surrounding secondary cell, and inserting new related data into at least one of the surrounding secondary cells; and

reinterpreting the primary objective or subject data by means of the organization of the related data in the surrounding secondary cells.

32. The process of claim 31, wherein the inserting related data step includes the step of identifying features or characteristics of the primary objective or subject data.

33. The process of claim 31, wherein the primary cell and the surrounding secondary cells are hexagonal.

34. The process of claim 31, including the steps of inserting the data from a surrounding secondary cell into a primary sub-cell of a sub-matrix, and identifying features and characteristics of the data in the primary sub-cell and inserting identified feature and characteristic data into six surrounding secondary sub-cells of the sub-matrix.

35. The process of claim 1, wherein the process for visually organizing informational concepts and relationships is performed using a computer readable code

embodied on a computer readable storage medium operable in connection with a computer.

36. The process of claim 20, wherein the process for visually organizing informational concepts and relationships is performed using a computer readable code embodied on a computer readable storage medium operable in connection with a computer.

37. The process of claim 25, wherein the process for visually organizing informational concepts and relationships is performed using a computer readable code embodied on a computer readable storage medium operable in connection with a computer.

38. The process of claim 31, wherein the process for visually organizing informational concepts and relationships is performed using a computer readable code embodied on a computer readable storage medium operable in connection with a computer.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.

Respectfully submitted,

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